

In The Claims:

1. (Previously Presented) A virtual reality modeling language (VRML) interface device comprising:

a World Wide Web browser wherein said browser includes a VRML viewer plug-in;

at least one external database comprising a reference designator, an X and Y location, rotation information, and package type for each of a plurality of components wherein said reference designator, said X and Y location, said rotation information, and said package type are created on differing software platforms; and

a VRML interface software program installed onto said browser wherein said program compiles visual information from said reference designator, said X and Y location, said rotation information, and said package type and said VRML viewer plug-in and creates a second image file based on said reference designator, said X and Y location, said rotation information, and said package type, wherein said second image file can be viewed independent of computer platform.

2. (Original) The device as recited in claim 1 further comprising a database interface to communicate between said browser and said at least one external database.

3. (Original) The device as recited in claim 2 wherein said database interface is a common gateway interface (CGI).

4. (Original) The device as recited in claim 2 wherein said database interface is a Java Applets routine.

5. (Currently Amended) The device as recited in claim 1 wherein said ~~plurality of first image files~~ reference designator, said X and Y location, rotation information, and package type are composed in a Gerber format.

6. (Currently Amended) The device as recited in claim 1 wherein said ~~plurality of first image files~~ reference designator, said X and Y location, rotation information, and package type are composed in a CAD format.

7. (Original) The device as recited in claim 1 wherein said second image files are composed in a JPEG format that can be viewed independent of computer platform.

8. (Original) The device as recited in claim 1 wherein said second image files are composed in a GIF format that can be viewed independent of computer platform.

9. (Previously Presented) A virtual reality modeling language (VRML) interface system for printed circuit board (PCB) manufacturing comprising:

a World Wide Web browser wherein said browser includes a VRML viewer plug-in;

at least one external database storing a reference designator, an X and Y location, rotation information, and package type for each of a plurality of components wherein said reference designator, said X and Y location, said rotation information, and said package type for each of said plurality of components are created on differing software platforms;

a VRML interface software program installed onto said browser wherein said program compiles visual information from said reference designator, said X and Y

location, said rotation information, and said package type for each of said plurality of components and creates a second image file based on said reference designator, said X and Y location, said rotation information, and said package type for each of said plurality of components wherein said second image file can be viewed independent of computer platform; and

a printed circuit board (PCB) assembly facility wherein assembly operators assemble PCBs from said second image file.

10. (Original) The system as recited in claim 9 further comprising a database interface to communicate between said browser and said at least one external database.

11. (Original) The system as recited in claim 10 wherein said database interface is a common gateway interface (CGI).

12. (Original) The system as recited in claim 10 wherein said database interface is a Java Applets routine.

13. (Currently Amended) The system as recited in claim 9 wherein said ~~plurality of first image files is~~ reference designator, said X and Y location, rotation information, and package type are partially comprised of Gerber images of PCB artwork.

14. (Currently Amended) The system as recited in claim 9 wherein said ~~plurality of first image files is~~ reference designator, said X and Y location, rotation information, and package type are partially comprised of CAD images of electronic components used in assembling said PCB.

15. (Currently Amended) The system as recited in claim 9 wherein said ~~plurality of first image files is~~ reference designator, said X and Y location, rotation information, and package type are partially comprised of a VRML database.

16. (Original) The system as recited in claim 15 wherein said VRML database is partially comprised of fiducials.

17. -19. (Cancelled)

20. (Original) The system as recited in claim 15 wherein said VRML database is partially comprised of package type information for components to be assembled on said PCB.

21. (Original) The system as recited in claim 9 wherein said second image files are composed in a JPEG format that can be viewed independent of computer platform.

22. (Original) The system as recited in claim 9 wherein said second image files are composed in a GIF format that can be viewed independent of computer platform.

23. (Previously Presented) A method to generate a second VRML image file based on a reference designator, an X and Y location, rotation information, and package type for each of a plurality of components created from differing software platforms comprising the steps of:

assembling at least one external database that contains said reference designator, said X and Y location, said rotation information, and said package type for each of said plurality of components created from differing software platforms;

loading a VRML interface software program onto a World Wide Web (WWW) browser wherein said program compiles visual information from said reference

designator, said X and Y location, said rotation information, and said package type for each of said plurality of components and creates a second VRML image file based on said reference designator, said X and Y location, said rotation information, and said package type for each of said plurality of components wherein said second VRML image file can be viewed independent of computer platform;

accessing a WWW server by using said WWW browser and using a database interface to access said reference designator, said X and Y location, said rotation information, and said package type for each of said plurality of components; and

downloading said reference designator, said X and Y location, said rotation information, and said package type for each of said plurality of components and using said VRML interface software program to generate said second image file.

24. (Original) The method as recited in claim 23 further comprising the step of viewing said second image file by utilizing said WWW browser wherein a VRML viewer plug-in is loaded onto said browser.